seven volumes of the works of Turgot, edited by him. The life of this statesman will occupy another volume, and a ninth will contain his lighter performances.

Of the Correspondents of the class *M. Riboud* has read a general account of the monuments and antiquities of the department of the Ain. *M. de Guignes* has read an answer to some criticisms on his Ancient History of China, in his Voyage to Pekin; and an Historical account of the Chinese Astronomy from the most ancient times to the year 776 B.C. *M. Silvester de Sacy* read a report from the committee on the plan of a Chinese Dictionary, which M. de Guignes is to publish. *M. Levrier* has shown, that a pretended charter of Lewis VII. dated 1174, is a forgery. *M. Charles Villers* has published his translation of Proffessor Heeren's prize essay on the influence of the Croisades: a view of the universities and system of public education in Protestant Germany, particularly in the kingdom of Westphalia: and his report to the institute on the present state of ancient history and literature in Germany. Another correspondent has sent a description of the Bashawlik of Bagdad, where he has long resided. This fine country, ravaged, since the fall of the Khalifs, by Tartars, Persians and Turks, but still retaining some traces of its ancient magnificence, is now threatened by the formidable and fanatic sect of the Wahabees. The author adds an account of this sect, which sprung from that of the Carmatians about half a century ago, has successively subjugated all the tribes, and has attained such importance, as to spread affright from the Persian Gulf to the confines of Syria and Cezirem.—These fanatics have drawn the sword against all religions, but more especially against all other Mussulmans, as corrupters of the true religion of Mohammed. With this M. de Sacy has printed some other pieces, particularly an account of the Yasidees, a sect actuated by similar principles, though as ancient as the first century of Mohammedanism.

DISCOVERIES AND IMPROVEMENTS IN ARTS, MANUFACTURES, &c.

Patent of Mr. Mark Isambard Brunel of Portsea, for a new mode of cutting Veneers, or thin board, by Machinery.

Dated Sept. 1806.

THE machinery for cutting veneers, consists of a frame, for supporting the wood to be cut, capable of being elevated, and of being moved forwards or backwards as required, and of a cutter, which has a to and fro motion longitudinally, that enables it to separate the veneer, as the timber is forced against it.

The frame is elevated by four screws rising from a cast iron carriage, that slides in rails at right angles to the cutter; each of these screws has a toothed wheel at its head, and they come sufficiently near, to admit of the action of an endless screw, placed at each extremity of a horizontal axis, so that on turning it round the four elevating screws are made to revolve, and raise the bed which they support The two elevating screws at one side of the endless screw, are right hand screws, and those at the other side, are left hand screws; and the spindle of the endless screw is furnished with handles proper for turning it to the degree required for each veneer.

The motion of the frame towards the cutter and back again, is given by a screw acting on a rack, at right angles to the cutter, so that by turning a wheel at its head, the carriage, with the frame and the timber it supports may be moved towards the cutter, and drawn back again, to admit of the timber being raised to take off another veneer.

The cutter consists of either a single piece, or of several, screwed to a frame which is moved back and forwards (by mill-work) before the timber horizontally along two rails;

which as they have to sustain great force, are connected by brackets to a hollow cylinder of cast iron, like a beam, that is fixed above them, which is itself supported by two standards, that rise from the platform on which the whole rests, and to which they are firmly bolted. The sliding frame of the cutter is connected with the mill work by an iron rod. Instead of the long cutter mentioned, a narrow one managed in a similar way, may be also used, according to the specification.

In order to sharpen the cutter a *lap* (or sharpening stone) is placed in the front of the frame, which carries the timber, in such a manner, that it can be raised by screws towards the cutter, under which it is brought by drawing back the carriage as much as necessary.

The timber to be cut, is placed with its side towards the cutter a little obliquely, and lies in a horizontal direction of course, as well as the cutter; it is fastened to the frame, on the bed which supports it, by cement or glue, in which latter case, the top of the bed should be covered with wood. The slider being supposed in motion, the workman attending the engine adjusts at first the table to a proper degree of elevation, propels the carriage by turning the screw placed for that purpose, and guided by the apparent effect of the cutter, continues to force forward the carriage until the veneer is entirely separated; he then moves the carriage back, by turning the screw the other way, and prepares for another cut by elevating the bed that sustains the timber, by the means already described.

Observations....By this engine a quantity of veneers can be procured from an equal bulk of timber, nearly double that produced by sawing, as the stuff lost by the action of the saw (which is very considerable in cutting veneers) is all saved by its effect.

Besides this it also saves the expense of plaining the veneers, for they come from the engine sufficiently smooth to require nothing but polishing to finish their surface, when used on any kind of furniture. The writer from inspection can also assert that in every other respect they are at least fully equal to sawed veneers if not superior.

Patent of Mr. Augustus Frederick De Heine of Burr-street, East Smithfield, London, for Improvements in Printing and Stamping Presses. Dated Feb. 1810.

Mr. De Heine's engine for pressing is intended as a substitute for a screw: and the mechanical arrangement which produces the power required is effected by moveable wedges passing over fixed ones, the former being attached to the lower end of a cylinder capable of being turned round by a lever, and the latter being fixed to the upper end of another cylinder which possesses only an ascending and descending motion; the two cylinders are placed vertically one over the other, and a spindle from one passes a sufficient length into a hole prepared for it in the centre of the other, to keep them connected together steadily in their proper positions. Only two wedges are attached to the faces of the cylinders, but it is obvious more may be used if required. These wedges the Patentee calls *sectors*, and states that either two sectors, a sector and a cylinder, or a sector and roller, may be placed, in his engine, to act against each other. It is obvious from their position on the extremities of cylinders, that their terminations laterally must be circular.

Observations....Where it is only required that the compressing power should move a little way (as is the case in printing, and in stamping various articles of metal, and other substances) Mr. De Heine's engine may be very well used instead of the screw; and as it can be made much cheaper, is so far advantageous. It also admits of having greater surfaces brought into action conveniently than the screw, so as to be capable of greater strength at a much less cost; but as the extent of its motion back and forwards must be very limited, the number of purposes besides those mentioned, will be of course but few, to which it can be applied beneficially.